

**ANNUAL ADMINISTRATIVE REPORT (FY2002) AND
WORK PLAN (FY 2003) FOR INVENTORIES AND VITAL SIGNS MONITORING**

FY2002-FY2003

EASTERN RIVERS AND MOUNTAINS NETWORK

New River Gorge National River (NERI)
Bluestone National Scenic River (BLUE)
Gauley River National Recreation Area (GARI)
Johnstown Flood National Memorial (JOFL)
Fort Necessity National Battlefield (FONE)
Friendship Hill National Historic Site (FRHI)
Upper Delaware Scenic and Recreational River (UPDE)
Delaware Water Gap National Recreation Area (DEWA)
Allegheny Portage Railroad National Historic Site (ALPO)
Appalachian National Scenic Trail (APPA)

Eastern Rivers and Mountains Network Approval Signatures

William Laitner for Board of Directors, Eastern Rivers and Mountains Network, Date

John Karish Date
Chief Scientist, PHSO

Elizabeth Johnson Date
Inventory and Monitoring Coordinator, Northeast Region

I. Overview and Objectives

The Eastern Rivers and Mountains Network (ERM) includes 10 national parks with significant natural resources. The parks range in size from approximately 66 to 30,000 hectares and are located across four states, PA, NY, NJ and WV. A relatively small segment of the Appalachian Trail in PA and NJ is included in this network. Biological inventory scoping workshops were held in 2001 to begin identifying gaps in scientifically based information on vertebrate and vascular plant species in these parks. With the help of subject matter experts attending these workshops, as well as park staff, existing data on birds, herps, fish, mammals and vascular plants was reviewed, and data gaps identified. Based on their knowledge of the parks, state, and regional species, these scientists estimated the percent documented in each of the parks and identified inventory priorities. In October 2001, the ERM Network Inventory Study plan was submitted to WASO and the Network received funds in FY02 to begin implementing vertebrate and vascular plant inventories. The plan focused on five of the nine parks in the Network, the four PA network parks (FONE, FRHI, ALPO and JOFL), were fortunate to have received substantial funding for biological inventories prior to the establishment of the WASO I&M Networks. In FY02 the ERM Network received funds from the Servicewide I&M program to begin implementing the identified vertebrate and vascular plant inventories and cooperative agreements were established.

In 2001, regional I&M product specifications were written, and included in all new biological inventory cooperative agreements established in 2002. These specifications provide some standardization of formats deliverables, such as, FGDC compliant metadata for all spatial data sets, FGDC Biological Profile for all biological data sets, and relational databases in MS Access. Because many cooperators have had little or no experience working in MS Access or creating FGDC compliant metadata, regional staff have assisted with, and developed relational databases for cooperators working on biological inventories to assure quality products at the completion of each project. Assistance will also be provided to cooperators in developing metadata for all new projects.

Projects that are ongoing in the Network include, compiling and entering existing data, legacy data, into the three WASO databases, NPSpecies, NatureBib and the Dataset Catalog. The NPSpecies database for each Network park will be verified and current by summer 2003. Taxonomic experts have been identified to review NPSpecies for some of the parks in the Network and that work will continue in 2003, once each park's database has been completed. The cooperative agreement with Penn State University (PSU) to update Naturebib for the four Northeast Region Networks, including the ERM Network has been extended. The research associate from PSU hired to correct and update NatureBib has been visiting each park to search for new documents and update existing information.

Vegetation mapping is underway in 7 of the 10 parks in the network. Air photos are planned for 8 parks in the network. A vegetation mapping strategy will be developed for the remaining 2 parks, APPA and UPDE in 2003.

The Eastern Rivers and Mountains Network should receive start-up funding to develop a vital signs monitoring program in FY03. A Network Coordinator and Data Manager will be hired in early 2003 to begin coordinating the program. A Network Board of Directors and Technical Steering Committee will be organized to assist and oversee program development. In 2003, the Network Coordinator will request that all Network resource managers attend a meeting to begin discussing park and network vital signs issues.

Objectives for Biological Inventories

1. Compile existing data on vertebrate and vascular plants and enter this information into NPSpecies, Naturebib and the Dataset Catalog.
2. Document 90% of vertebrate and vascular plant species in the parks through targeted field investigations.

3. Complete data management tasks.
4. Complete vegetation mapping for the Network parks.
5. Contribute to general management planning in Network parks.

Objectives for Vital Signs Monitoring

6. Hire a Network Coordinator and Network Data Manager to track inventories and implement the network "vital signs" monitoring program.
7. Establish a Board of Directors and Science Advisory Committee.
8. Summarize existing data and understanding and prepare for vital signs scoping workshops

II. Accomplishments (FY2002) and Scheduled Activities (FY2003)

A. Biological Inventories

Objective 1 – Continue to compile and evaluate existing data for each park into NPS databases (all parks).

Task 1.1 – NPSpecies (all parks)

- FY 2002 Accomplishments: (1) Through an existing cooperative agreement with Penn State University (PSU) a part-time research associate began to convert and verify existing data in the Network's NPSpecies database in the spring of 2002 (this position is shared between two Networks, the Mid-Atlantic and Eastern Rivers and Mountains). Existing records in NPSpecies were to be verified and corrected in association with the original hard copy documents. This included verifying each species with its associated reference, identifying species in the database not referenced and removing them, addition or removal of documented common or scientific names, and adding locational information, abundance and nativity information. Spelling errors were also to be corrected as well, and any new data gathered in 2001/2002 entered. Unfortunately, due to problems with staff, the verification process is not complete for all of the ERM Network parks. New staff is currently being hired to complete this project for the remaining Network parks, FONE, FRHI, ALPO and JOFL. (2) Through a cooperative agreement with the University of Rhode Island a part-time research assistant was hired to complete data mining for existing information on vertebrates and vascular plants found at UPDE. This information has been and will continue to be entered into NPSpecies. (3) Regional I&M staff at URI compiled and entered existing vertebrate and vascular plant data into NPSpecies for NERI, BLUE and GARI. These data have been verified with the original, hard copy documents and all three databases submitted to WASO for upload to the web version of NPSpecies. (4) Verification of all plant species in the NERI, BLUE and GARI NPSpecies databases, by Sam Norris, a botanist from WV DNR, is complete and a report submitted. This report includes the calculation of the remaining percentage of species to be documented in each of the parks. (5) The Student Conservation Association technician hired at DEWA to verify and enter backlogged references for the park into NPSpecies has completed this project.
- Activities and Products Scheduled FY 2003: (1) Complete the verification process for NPSpecies for FONE, JOFL, ALPO and FRHI. (2) Complete UPDE data mining and NPSpecies verification. (3) Complete the taxonomic review of DEWA's NPSpecies database. The following experts were identified, Carolyn Mahan from Penn State Altoona-mammals, John Behler from Wildlife Conservation Society-herps, Bill Olson, private consulting botanist-plants, Jay Stauffer from Penn State University-fish, and Terry Masters from East Stroudsburg University-birds. (4) Assist all Network parks in reviewing their park database and continue to hire taxonomic specialists to review NPSpecies for the Network. (5) Provide NPSpecies training to park staff. (6) Gather data collected in 2002 from Network parks and enter it into NPSpecies and other appropriate NPS databases.

Task 1.2 NatureBib (all parks)

- FY 2002 Accomplishments: (1) Through an existing cooperative agreement with PSU, a full-time research associate is entering and verifying existing references in the NPS bibliographic database, NatureBib. This is a shared position between the four Northeast Region Networks. In order to locate new records for inclusion into each park database, update work includes visits to the parks, as well as searches and/or visits to local, state, and federal public, private, educational, and governmental libraries and repositories. Online databases and resources are also searched for relevant natural resource information via the Internet or locally. Also included in this updating is the editing of the existing records for duplication, authority control, and data enhancement due to multiple source, non-NatureBib originated cataloging. Site visits were made to DEWA, FONE, FRHI, ALPO and JOFL.
- Activities and Products Scheduled FY 2003: (1) Complete the update and verification of Naturebib, including site visits to BLUE, GARI, NERI and UPDE.

Objective 2 – Document 90% of vertebrate and vascular plant species in the parks through targeted field investigations.

Task 2.1 – Mammal surveys

- FY 2002 Accomplishments: *Bats* (1) A proposal was submitted to the Network to conduct a baseline inventory of bat community composition, relative abundance and distribution at NERI, BLUE and GARI, by Dr. Steven Castleberry, University of Georgia, Dr. W. Mark Ford, USDA Forest Service, M. Alex Menzel, WV University and Jennifer Menzel, USDA Forest Service. (2) The proposal was peer reviewed by an ecologist from VA DGIF with significant experience working with bats, as well as NPS biologists. (3) An interagency agreement was established with USDA Forest Service to fund this proposal. (3) The cooperators have begun to delineate primary habitats and identify potential sampling locations using GIS as well as conduct site visits to confirm accessibility and feasibility of these locations. (4) At FONE and FRHI, Brad Ross and Penn State investigators completed mammal trapping and vehicular-road surveys for mammals during the last two weeks of July, 2002. They detected 116 individuals and 19 species of mammals at FONE. One state unrankable species (fox squirrel [*Sciurus niger*]) and one species recently reintroduced into Pennsylvania (fisher [*Martes pennanti*]) occurred at FONE. Investigators detected 63 individuals and 15 species of mammals at FRHI highlighted by fox squirrel. The most abundant mammals at both parks included deer mouse (*Peromyscus maniculatus*), white-footed mouse (*P. leucopus*), and white-tailed deer (*Odocoileus virginianus*).
- Activities and Products Scheduled FY 2003: (1) Bat surveys will be initiated in the spring 2003 using mist netting and Anabat II detectors. (2) First progress report due September 2003. (3) In FY02, NERI funded a one season project through park funding, to conduct a baseline inventory of bats utilizing abandoned mine portals at NERI. Field work was conducted in the summer of 2002, by researchers from West Virginia University. During this inventory a very rare species was caught, Rafinesque's Big-eared bat. This discovery is only the third record for this species in West Virginia. In FY03, an amendment to the cooperative agreement with West Virginia University will be made and the ERM Network will fund a survey of bats utilizing the abandoned mine portals at GARI. Field work will be in the fall of 2002 by the same team that conducted the work at NERI. (4) A final report from FONE and FRHI mammals and birds is due.

Task 2.2 –Avian Surveys

- FY 2002 Accomplishments: (1) A cooperative agreement was established with East Stroudsburg University, Dr. Terry Master, to inventory grassland birds at DEWA. Field work began in the summer of 2002. (2) AT FONE and FRHI, Brad Ross and Penn State Univ. investigators surveyed bird populations during the fall migratory season of 2001, the winter season of 2001-2002, the spring migratory season of 2002, and the breeding season of 2002 using point-count, vehicular-road, diurnal raptor and vulture, owl,

and riparian-bird surveys. They detected 3,792 individuals and 115 bird species at FONE. Seventeen species of special concern occurred at FONE, including two state vulnerable species, northern goshawk (*Accipiter gentilis*) and northern saw-whet owl (*Aegolius acadicus*). They detected 3,670 individuals and 126 bird species at FRHI highlighted by three state vulnerable species, great blue heron (*Ardea herodias*), northern bobwhite (*Colinus virginianus*), and summer tanager (*Piranga rubra*).

- Activities and Products Scheduled FY 2003: (1) Complete the second year of the grassland bird survey at DEWA. The final report is due December 2003. (2) Review a second proposal submitted by Terry Master to conduct a wetland bird survey at DEWA for possible funding in FY03. (3) A final report from FONE and FRHI mammals and birds is due.

Task 2.3 – Fish surveys

- FY 2002 Accomplishments: (1) A scope of work and request for proposals was prepared by park staff at DEWA to sample back-channel fish habitats of the Delaware River at UPDE and DEWA, with a focus on twelve native species of special interest. (2) Preliminary data was received from Dr. Stuart Welsh from West Virginia University for a two-year fish inventory of the New River and its tributaries. The agreement was extended for tributary sampling to allow for higher flows.
- Activities and Products Scheduled FY 2003: (1) Review proposals submitted to the Network for DEWA and UPDE fisheries inventory. Establish cooperative or interagency agreement dependent upon selected proposal. (2) A report on NERI fish inventory is due by December 2003 as part of graduate thesis.

Task 2.4 – Herpetological surveys

- FY 2002 Accomplishments: (1) The Wildlife Conservation Society (WCS) continued herpetological inventories with funding from planning. Network funds were used for vehicles. (2) The final year of a three year herpetological inventory of GARI by Marshall University cooperators, was funded by the Network.
- Activities and Products Scheduled FY 2003: (1) Receive final report for WCS work at DEWA. Several different versions of a database have been used during the herpetological inventory work. Database compatibility will be resolved as the final reports are developed. (2) Receive final report and deliverables from Marshall University cooperators for GARI. (3) Receive and review final report and deliverables for herpetological inventories conducted at FONE, FRHI, ALPO and JOFL.

Task 2.5 – Floristic Inventory

- Activities and Products Scheduled FY 2003: (1) Review proposal for floristic inventory of BLUE and GARI for possible funding in 2003.

Objective 3- Complete data management tasks.

Task 3.1 – Database development, entry and archiving of existing inventory data (GARI, BLUE, NERI)

- FY 2002 Accomplishments: (1) Through a cooperative agreement with Marshall University, a research assistant, with the assistance of regional I&M staff, developed a relational database in MS Access and entered three volumes of hard copy herpetological data collected by Dr. Tom Pauley at NERI in the early 1990's. All of Dr. Pauley's voucher specimens collected at the park were identified within the Marshall collections and catalogued in NPSpecies and the relational database. (2) A relational database was developed by the Marshall research assistant to house the herpetological data collected at BLUE by Dr. Pauley. (3) A relational database in MS Access for herpetological data was developed by regional I&M staff to house data currently being collected at GARI.
- Activities and Products Scheduled FY 2003: (1) Complete conversion of BLUE herp data into relational database. (2) Receive all deliverables following I&M specifications for Marshall University database

development and legacy data conversion project for NERI and BLUE, as well as GARI herpetological inventory project currently being completed. (3) Seek review of spatial components of these data.

Task 3.2-Relational database development for park inventories (DEWA, NERI, BLUE, GARI, UPDE)

- FY 2002 Accomplishments: (1) A relational MS Access database was developed by regional I&M staff to house grassland bird data collected by Dr. Terry Master, East Stroudsburg University, at DEWA. (2) A relational MS Access database was developed by regional I&M staff for herpetological inventory data collected at GARI (see above).
- Activities and Products Scheduled FY 2003: (1) Assist in the development of a relational MS Access database for bat inventory data to be collected at NERI, GARI and BLUE, in 2003-2004. (2) Assist in the development of a relational database for fisheries work to be conducted at DEWA and UPDE.

Task 3.3-Relational database development for PA park inventories (FONE, FRHI, ALPO, JOFL)

- FY 2002 Accomplishments: (1) A student was hired at North Carolina State University (NCSU) to develop relational databases in MS Access, assist cooperators in developing FGDC compliant metadata for their projects, and convert incoming inventory data from projects funded through regional science that did not follow I&M product specifications. Both herp and avian inventory data collected by Dr. Richard Yahner from Penn State University was converted to the new database. This project was funded by regional science, but Regional I&M staff advised and assisted the student at NCSU with database development, requirements and review.
- Activities and Products Scheduled FY 2003: (1) Continue to convert existing inventory data to relational access databases and assist cooperators in developing FGDC compliant metadata following the biological profile. (2) Provide these Access databases to parks, and assist park staff in developing data entry forms for further use for park inventories.

Task 3.4 Revise the existing regional I&M program product specifications (All parks)

- FY2002 Accomplishments: (1) Northeast Regional I&M Program product specifications were written in FY01, and incorporated in all cooperative agreements funded through the I&M program in the region.
- Scheduled FY 2003 Activities and Products: (1) The regional product specifications were initially written to ensure that all deliverables for incoming biological inventory data follow the standard I&M formats as well as provide a checklist to ensure their completeness by including FGDC metadata, Access databases, spatial data, and reports. These specifications need to be expanded to include more detailed specifications for long-term monitoring projects.

Task 3.5 Data mining project- UPDE (UPDE)

- FY2002 Accomplishments: (1) A research assistant was hired part-time at the University of RI to conduct vertebrate and vascular plant data mining for UPDE. This information is being entered into NPSpecies.
- Scheduled FY 2003 Activities and Products: Hire a new cooperator to complete UPDE NPSpecies database and identify taxonomic experts to review.

Task 3.6 Assist cooperators with developing FGDC compliant metadata for biological inventories (All parks)

- FY2002 Accomplishments: (1) Discussions among cooperators, data managers, and I&M staff in the Northeast have identified the need to provide support to cooperators in developing FGDC compliant metadata for their projects. Currently in the ERM Network there are seven cooperators from different Universities conducting biological inventories in the Network parks. The region itself has many more.
- Scheduled FY 2003 Activities and Products: (1) An amendment to the existing cooperative agreement with NCSU FTSC, will be established to train undergraduates at NCSU to develop FGDC compliant metadata following the biological profile. These students will then directly assist Northeast Region I&M

cooperators with the development of FGDC compliant metadata for all projects.

Task 3.7 Peer review process for biological inventory work (All parks)

- FY2002 Accomplishments: (1) A cooperative agreement was amended with Penn State University to provide funding to staff (Dr. Richard Yahner) to review incoming biological inventory data and reports for the ERM Network and some projects being conducted in Mid-Atlantic Network parks.
- Scheduled FY 2003 Activities and Products: (1) Continue peer review as data and reports are submitted to the Networks.

Task 3.8 Archive data sets and reports(All parks)

- FY2002 Accomplishments: (1) An informal data management meeting was held at the University of RI in Jan 2002. Attendees including regional I&M staff, regional GIS staff, regional senior scientists, the Regional Information Management Coordinator, CACO and SHEN staff, and staff from both FTSC's (URI and NCSU). The purpose of this meeting was to identify and begin addressing the data management needs of the regional I&M Program.
- Scheduled FY 2003 Activities and Products: (1) Develop archival procedures for incoming biological data, including vegetation mapping field forms, plots data and reports. (2) Identify data storage sites.

Objective 4- Complete vegetation mapping for the Network parks.

Task 4.1 –Vegetation Mapping at DEWA

- FY 2002 Accomplishments: (1) PA Natural Diversity Inventory effort at DEWA was less than initially planned since photography was not flown until Spring 2002. In addition, NPS requested that HOFU be moved ahead of DEWA in sampling and map preparation because of a General Management Plan need. (2) PANDI attended training on fire fuels sampling so that a fire fuels mapping component may be added to the vegetation mapping effort. (3). DEWA planned to acquire both leaf-on and leaf-off photography but instead acquired leaf-off photography only and for a significantly larger geographic area than originally anticipated. NC State University completed: quality check and scan all of the leaf-off photography, an appropriately tiled orthophoto mosaic for the area within the park boundary, FGDC compliant metadata for and assess positional accuracy of the mosaic. NC State U provided DEWA with scanned image files of all of the leaf-off photography (~1,000 photos/files).
- Activities and Products Scheduled FY 2003: (1) PA Natural Diversity Inventory will continue field plots sampling in DEWA and will prepare the vegetation map over the next few years. (2) Leaf-off mosaic is scheduled for completion by November 15, 2002 by NC State U. A final report describing data development procedures and positional accuracy assessment methodologies and results will be done.

Task 4.2 –Vegetation Mapping at NERI, BLUE and GARI

- FY 2002 Accomplishments: (1) Field sampling is almost complete at NERI. Problems with the photography contract meeting specifications caused the existing contract to be cancelled.
- Activities and Products Scheduled FY 2003: (1) Obtain photography for NERI, BLUE and GARI. The current contract will be ended since GeoVantage cannot meet the specifications. New photography will be flown and conventional stereo photo vs digital imagery are being considered. (2) NatureServe will submit a proposal to crosswalk the classification for NERI to the National Vegetation Classification.

Task 4.3 –Vegetation Mapping at ALPO, JOFL, FONE, FRHI (and GETT EISE)

- FY 2002 Accomplishments: (1) An amendment to the Cooperative Agreement with PA Natural Diversity Inventory (PANDI) was partially funded to complete vegetation maps for 4 network parks and 2 Mid-Atlantic parks, all in Pennsylvania. PANDI will review orthophotography (to be provided) and train the Western Pennsylvania Conservancy staff in field data collection for vegetation classification and mapping at the four network parks. PANDI will be responsible for data analysis, mapping, development of the key and classification, all reporting on spatial and non-spatial data and accuracy assessment.

- Activities and Products Scheduled FY 2003: (1) North Carolina State University is developing contract specification for air photos and assembling shape files and boundaries (in cooperation with park comments) for parks to be flown in Spring 2003, leaf off, CIR. (2) A contract for air photos will go out for bid and Richard Easterbrook will act a contracting officer's technical representative for this set of photos. (3) NCSU will create digital orthophoto mosaics from air photos. (4) An amendment to the NatureServe master agreement will be developed to crosswalk the PA parks classification to the National Vegetation Classification (NVC).

Task 4.4 –Vegetation Mapping at UPDE

- FY 2002 Accomplishments: none
- Activities and Products Scheduled FY 2003: (1) A proposal was requested from NatureServe to develop a strategy for completing a vegetation map for UPDE, based on limited land ownership. A meeting with NatureServe, PA Natural Diversity Inventory, and NY Natural Heritage Program is planned for February.

Task 4.5 - Assist in the development of standards for vegetation map review and assessment (All parks)

- Scheduled FY 2003 Activities and Products: (1) Various components of the veg mapping process has been funded for 34 of 38 parks in the Northeast Region. The FIIS vegetation map is in final review and others will soon follow. Development of a standard review protocol is needed. An initial meeting was held in Luray, VA during the veg mapping training session to discuss gaps in veg mapping guidelines, to identify parties responsible for review of spatial data, ecological data and the classification and keys.

Task 4.6 - Provide training in vegetation mapping (All parks)

- Scheduled FY 2003 Activities and Products: (1) Funding to organize a training session for Northeast Region and National Capital Region was provided through the Northeast Temperate Network by the vegetation mapping program. NatureServe was hired to develop the course materials, hire staff to attend and teach. The training was held in October in Shenandoah National Park. Two days were classroom session and one day of fieldwork. Various side meetings every evening completed the educational opportunity for many attendees as we reviewed completed vegetation mapping products for FIIS and VAFO. Sixty people attended. Presentations will be posted to the Coastal and Barrier Network website in the future.

Objective 5- Contribute to general management planning in Network parks.

- FY2002 Accomplishments: (1) A proposal developed by senior scientists in the Northeast Region was submitted and funded by the WASO planning office. The purpose of this proposal is to synthesize and interpret existing natural resource information and studies to better inform park planning at NERI. NERI is scheduled to begin its GMP in 2004/5. Northeast Region I&M staff at URI, have begun to compile and summarize existing natural resource data to assist with this process.
- Scheduled FY 2003 Activities and Products: (1) Northeast Region I&M staff will continue to assist regional scientists, CESU staff, park staff and planners to meet the following goals of the proposal mentioned above: identify and review existing natural resource studies and data sets for NERI; analyze, consolidate and synthesize this information in a manner that portrays the historical and existing park ecosystem(s) and identifies the natural resource characteristics and conditions in the context of each park's purpose and mission; identify issues and opportunities that should be addressed during the GMP process; identify critical gaps in the knowledge base which must be addressed prior to initiating the planning process; identify and map (GIS) usable natural resource data to better inform the GMP process; present the results of this work to park planners and managers in a way that is understandable and useable in the park planning and management process(s); and identify a cadre of knowledgeable natural resource professionals that would continue in an advisory role during each park's planning process.

B. Vital Signs Monitoring

Objective 6- Hire a Network Coordinator and Network Data Manager to track inventories and implement the network "vital signs" monitoring program.

- Activities and Products Scheduled FY 2003: (1) An ERM Network Coordinator and Data Manager will be hired. A panel that includes the Northeast Regional I&M Coordinator and a Network Board of Directors representative will review position descriptions. (2) Based on a Board of Director's meeting in October 2002, Penn State University was the preferred option for a duty station for the network coordinator and data manager. The Penn State location was approved January 2003.

Objective 7- Establish a Board of Directors and Science Advisory Committee.

Activities and Products Scheduled FY 2003: (1) The Board of Director's meeting was held via a conference call and powerpoint presentation. There was 100% representation from the network for several hours including superintendents, resource managers, resource specialists and site managers for parks as well as the chief scientist and chief natural resources from Philadelphia Support Office. The process for establishing vital signs was discussed, inventory progress was presented, a Board representative was elected (William Laitner) and plans for 2003 were discussed. (2) A Network Charter was redrafted and approved. (3) Resource Managers on the conference call were charged with assembling a steering committee for the network and recommending membership, role and function to the Board.

Objective 9- Summarize existing data and information on monitoring programs and prepare for vital signs scoping workshops.

- Activities and Products Scheduled FY 2003: (1) Under a cooperative agreement with Penn State University, summaries of existing data and monitoring programs (except water) will be developed. (2) Scoping workshops will be held to recommend vital signs. (2) A natural resource program review will guide the development of the I&M program at UPDE, unique in land ownership. (3) Level I water quality reports for network parks will be reviewed and state water quality standards and designations summarized. Existing monitoring programs will be evaluated. (4) NC State U will assist in spatial data synthesis for the network.

III. Staffing

John Karish, Chief Scientist PHSO
Elizabeth Johnson, Northeast Region I&M Coordinator
La Donna Francis Sifford, Research Associate, PSU
Scott Tiffney, Research Associate, PSU
Sara Stevens, Coastal and Barrier Network Data Manager

ERM Network Cooperators for Biological Inventories

Wildlife Conservation Society-Dr. John Behler
NatureServe, Lesley Sneddon
North Carolina State University, Field Technical Support Center, Dr. Hugh Devine
WVDNR-Jim Vanderhorst
Sam Norris, private contract, Botanist
Richard Easterbrook, PETE (air photos, vegetation mapping)
USDA Forest Service/University of Georgia, Dr. Mark Ford/Dr. Steven Castleberry
Marshall University, Dr. Tom Pauley
West Virginia University, Dr. Stuart Welsh
USGS, Dr. Petra Wood
Ca University of PA, Dr. Brian Paulson
East Stroudsburg University, Dr. Terry Master

Penn State University, Dr. Richard Yahner, Dr. Jay Stauffer, Brad Ross
PA Natural Diversity Inventory (PANDI), Gred Podneisinski and Tony Davis
Western Pennsylvania Conservancy
NY Natural Heritage Program, Greg Edinger

ERM Board of Directors

Joanne Hanley (ALPO, JOFL, FONE, FRHI)
William Laitner (DEWA)
David Forney (UPDE)
Calvin Hite (NERI, BLUE, GARI)
Pamela Underhill (APPA)

IV. Public Interest Highlights

- Avian and mammal inventory at two small cultural parks Fort Necessity and Friendship Hill in western Pennsylvania illustrated the importance of protected areas for species of concern. Brad Ross and Penn State investigators surveyed bird populations and documented 115 bird species at FONE, seventeen species were of special concern, including two state vulnerable species, northern goshawk (*Accipiter gentilis*) and northern saw-whet owl (*Aegolius acadicus*). At FRHI, 126 bird species were documented, highlighted by three state vulnerable species, great blue heron (*Ardea herodias*), northern bobwhite (*Colinus virginianus*), and summer tanager (*Piranga rubra*). Mammal inventories documented 19 species of mammals at FONE including one state unrankable species (fox squirrel [*Sciurus niger*]) and one species recently reintroduced into Pennsylvania (fisher [*Martes pennanti*]). At FRHI, 15 species of mammals were documented highlighted by fox squirrel.

V. Reports, Publications and Presentations

Behler, John. June 22, 2002. Snake Tales and Turtle Trails: Reptiles of Delaware Water Gap National Recreation Area. Presentation to The Wildlife Conservation Society meeting, Delaware Water Gap National Recreation Area, Bushkill, Pennsylvania.

Brotherton, David K. et al. July 05, 2002. Paired hemlock-hardwood stream salamander survey-Delaware Water Gap National Recreation Area: An analysis of species composition and distribution. Presentation to a joint meeting of Ichthyologists and Herpetologists, Kansas City, Missouri.

October 2, 2000: First Board of Director's meeting via conference call and powerpoint presentation. The meeting was "attended" by 22 staff from parks, I&M program and Northeast Region.

Johnson, Elizabeth. May 2002. Northeast Region Inventory and Monitoring Program Status. Presentation to Northeast Leadership Council, Cape Cod, Mass.

Devine, Hugh. December 2002. Progress Report

Draft Reports received:

Paulson, Brian. 2002. Inventory of reptiles and amphibians at FONE and FRHI

Brad Ross. 2002 Birds and Mammals

Behler, John, Robert Cook and David Brotherton, DEWA herpetological inventories, wood turtle studies

VI. Status of Park Vital Signs Monitoring

Planning and implementation of vital signs monitoring will begin in 2003 if start up funding becomes available to the Network.

Budget Summary

FY02 Admin Report

Network: Eastern Rivers and Mountains

Category: 1_Income

<i>Description</i>	<i>\$ Amount</i>	<i>\$\$ Source</i>	<i>Expense Type</i>	<i>Comments</i>
Regional Coordinator Salary	\$21,250.00	I&M - VS Monitoring	\$\$	
Veg. Mapping Funds	\$218,400.00	Veg. Mapping Program		
Regional Contribution from Karish	\$5,000.00	Park or Regional	\$\$	
Inventory Funds	\$173,400.00	I&M - Biol. Inventory	\$\$	
Subtotal	\$418,050.00			

Category: 2_Personnel

<i>Description</i>	<i>\$ Amount</i>	<i>\$\$ Source</i>	<i>Expense Type</i>	<i>Comments</i>
Regional Coordinator Salary	\$21,250.00	I&M - VS Monitoring	\$\$NPS	
Subtotal	\$21,250.00			

Category: 3_Coop. Agreements

<i>Description</i>	<i>\$ Amount</i>	<i>\$\$ Source</i>	<i>Expense Type</i>	<i>Comments</i>
PennState/Yahner; Peer Review ERM	\$5,000.00	Park or Regional	\$\$ Univ_Non-CESU	
DEWA/Melissa; Housing NPSpp. DEWA	\$526.00	I&M - Biol. Inventory	\$\$NPS	
E.StroudsburgU/Master; Grassland Birds DEWA	\$47,568.00	I&M - Biol. Inventory	\$\$Univ_Non-CESU	
E.StroudsburgU/Master; NPSpp. Birds DEWA	\$1,735.00	I&M - Biol. Inventory	\$\$Univ_Non-CESU	
PANDI/Davis; Veg. Map GETT EISE ALPO JOFL FRHI	\$118,438.00	Veg. Mapping Program	Other non-Federal	
Univ. Richmond/Mitchell/Herp. Recon.	\$0.00	I&M - Biol. Inventory	\$\$	Univ_Non-CESUFY02 ERM owes CBN \$5000 total =\$5552 FY02 ERM owes CBN \$5000
URI/Nicholson; Data Mining UPDE	\$10,000.00	I&M - Biol. Inventory	\$\$Univ_Non-CESU	
USFS/Ford; Bats; NERI BLUE GARI	\$94,644.00	I&M - Biol. Inventory	\$\$	Other FederalFY02 ERM paid \$94644; Owes NET \$17967; Total=\$112611
Wild. Cons. Soc./Behler; Herp Inv. Vehicles DEWA	\$2,700.00	I&M - Biol. Inventory	\$\$Other non-Federal	
MarshallU/Pauley; Year3 Vert.s GARI	\$0.00	I&M - Biol. Inventory	\$\$	Univ_Non-CESUFY02 ERM owes NET \$13499
MarshallU/Pauley; Year3 Vert.s GARI	\$12,227.00	I&M - Biol. Inventory	\$\$Univ_Non-CESU	
Subtotal	\$292,838.00			

Category: 4_Contracts

<i>Description</i>	<i>\$ Amount</i>	<i>\$\$ Source</i>	<i>Expense Type</i>	<i>Comments</i>
Abies, Inc./Vanderhost; Veg. Map NERI/BBLUE	\$99,962.00	Veg. Mapping Program	Other non-Federal	
Contractor/Olsen; NPSpp. Plants DEWA	\$4,000.00	I&M - Biol. Inventory	Other non-Federal	
Subtotal	<i>\$103,962.00</i>			

Category: 7_Other

<i>Description</i>	<i>\$ Amount</i>	<i>\$\$ Source</i>	<i>Expense Type</i>	<i>Comments</i>
USFS/Ford; Bats; NERI BLUE GARI	\$0.00	I&M - VS Monitoring	Other Federal	FY02 ERM paid \$94644; Owes NET \$17967; Total=\$112611
Subtotal	<i>\$0.00</i>			

Budget Analysis

Analysis of Expenses by Expense Type

<i>Funding Source</i>	<i>Total \$\$</i>	<i>NPS</i>	<i>USGS</i>	<i>Other Federal</i>	<i>Univ.-CESU</i>	<i>Univ_Non-CESU</i>	<i>Other non-Federal</i>
I&M - Biol. Inventory	\$173,400	\$526		\$94,644		\$71,530	\$6,700
I&M - VS Monitoring \$\$	\$21,250	\$21,250		\$0			
Park or Regional \$\$	\$5,000					\$5,000	
Veg. Mapping Program	\$218,400						\$218,400
<i>Totals</i>	\$418,050	\$21,776		\$94,644		\$76,530	\$225,100

Analysis of Expenses by Category

<i>Funding Source</i>	<i>Total \$\$</i>	<i>Personnel:</i>	<i>Coop Agree.</i>	<i>Contracts</i>	<i>Operations/Equip.</i>	<i>Travel</i>	<i>Other</i>
I&M - Biol. Inventory	\$173,400		\$169,400	\$4,000			
I&M - VS Monitoring \$\$	\$21,250	\$21,250					\$0
Park or Regional \$\$	\$5,000		\$5,000				
Veg. Mapping Program	\$218,400		\$118,438	\$99,962			
<i>Totals</i>	\$418,050	\$21,250	\$292,838	\$103,962			\$0

Expense Totals By Category

<i>Category</i>	<i>SubTotal</i>	<i>Percent</i>
2_Personnel	\$21,250	5.08%
3_Coop. Agreements	\$292,838	70.05%
4_Contracts	\$103,962	24.87%
7_Other	\$0	0.00%
	\$418,050	

Budget Summary

FY03 Work Plan

Network: Eastern Rivers and Mountains

Category: 1_Income

<i>Description</i>	<i>\$ Amount</i>	<i>\$\$ Source</i>	<i>Expense Type</i>	<i>Comments</i>
Monitoring Funds	\$150,000.00	I&M - VS Monitoring	\$\$	
Regional Coordinator Salary	\$21,250.00	I&M - VS Monitoring	\$\$	
Veg. Mapping Funds	\$75,000.00	Veg. Mapping Program		requested
Water Quality Funds	\$63,000.00	WRD - WQ Monitoring		
Inventory Funds	\$158,900.00	I&M - Biol. Inventory	\$\$	
Subtotal	\$468,150.00			

Category: 2_Personnel

<i>Description</i>	<i>\$ Amount</i>	<i>\$\$ Source</i>	<i>Expense Type</i>	<i>Comments</i>
Data Manager Salary	\$30,000.00	I&M - VS Monitoring	\$\$NPS	
Network Coordinator Salary	\$30,000.00	I&M - VS Monitoring	\$\$NPS	
Regional Coordinator Salary	\$21,250.00	I&M - VS Monitoring	\$\$NPS	
Regional Coordinator Salary	\$3,534.00	I&M - VS Monitoring	\$\$	NPSadditional charge for Reg. Coord.
Subtotal	\$84,784.00			

Category: 3_Coop. Agreements

<i>Description</i>	<i>\$ Amount</i>	<i>\$\$ Source</i>	<i>Expense Type</i>	<i>Comments</i>
Pandi/Veg. Map	\$40,000.00	Veg. Mapping Program	Other non-Federal	
NCState/Database Dev.	\$29,966.00	I&M - VS Monitoring	\$\$Univ_Non-CESU	
Water Quality Status "305B" reports	\$63,000.00	WRD - WQ Monitoring	Univ_Non-CESU	
NERI BLUE GARI Photos	\$15,000.00	Veg. Mapping Program	Other non-Federal	
NatureServe/Crosswalk Veg. Map	\$20,000.00	Veg. Mapping Program	Other non-Federal	
PennState Network Support, data mining	\$31,000.00	I&M - VS Monitoring	\$\$Univ_Non-CESU	
USGS/Petra Woods Inv. Bats in Mines	\$3,534.00	I&M - Biol. Inventory	\$\$	USGSTotal \$4000 split \$466 M funds + \$3534 I funds
PennState Administrative Charge	\$10,000.00	I&M - VS Monitoring	\$\$	Univ_Non-CESUcharge for employee support
USGS/Petra Woods Inv. Bats in Mines	\$466.00	I&M - VS Monitoring	\$\$	USGSTotal \$4000 split \$466 M funds + \$3534 I funds
ESU/Masters Marsh Birds DEWA	\$28,900.00	I&M - Biol. Inventory	\$\$Univ_Non-CESU	

Acad. Nat. Sci Phil./Fish Invent.	\$65,000.00	I&M - Biol. Inventory	\$\$Univ_Non-CESU	
Subtotal	\$306,866.00			
Category: 4_Contracts				
<i>Description</i>	<i>\$ Amount</i>	<i>\$\$ Source</i>	<i>Expense Type</i>	<i>Comments</i>
WVNHP/Vanderhorst Floristic Inv. BLUE GARI	\$30,000.00	I&M - Biol. Inventory	\$\$Other non-Federal	
Subtotal	\$30,000.00			
Category: 5_Operations/Equipm				
<i>Description</i>	<i>\$ Amount</i>	<i>\$\$ Source</i>	<i>Expense Type</i>	<i>Comments</i>
Equipment	\$7,034.00	I&M - VS Monitoring	\$\$Other non-Federal	
Subtotal	\$7,034.00			
Category: 6_Travel				
<i>Description</i>	<i>\$ Amount</i>	<i>\$\$ Source</i>	<i>Expense Type</i>	<i>Comments</i>
Travel	\$3,000.00	I&M - VS Monitoring	\$\$Other non-Federal	
Subtotal	\$3,000.00			
Category: 7_Other				
<i>Description</i>	<i>\$ Amount</i>	<i>\$\$ Source</i>	<i>Expense Type</i>	<i>Comments</i>
FY02 ERM Owes NET \$17967	\$17,967.00	I&M - Biol. Inventory	\$\$	Other FederalFY02 NET PAID USFS/Ford; Bats; NERI BLUE GARI
FY02 ERM owes NET \$13499	\$13,499.00	I&M - Biol. Inventory	\$\$	NPSFY02 NET PAID MarshallU/Pauley; Year3 Vert.s GARI
FY02 ERM owes CBN \$5000	\$5,000.00	I&M - VS Monitoring	\$\$	Univ_Non-CESUFY02 CBN paid Univ. Richmond/Mitchell/Herp. Recon.
Subtotal	\$36,466.00			

Budget Analysis

Analysis of Expenses by Expense Type

<i>Funding Source</i>	<i>Total \$\$</i>	<i>NPS</i>	<i>USGS</i>	<i>Other Federal</i>	<i>Univ.-CESU</i>	<i>Univ_Non-CESU</i>	<i>Other non-Federal</i>
I&M - Biol. Inventory	\$158,900	\$13,499	\$3,534	\$17,967		\$93,900	\$30,000
I&M - VS Monitoring \$\$	\$171,250	\$84,784	\$466			\$75,966	\$10,034
Veg. Mapping Program	\$75,000						\$75,000
WRD - WQ Monitoring	\$63,000					\$63,000	
Totals	\$468,150	\$98,283	\$4,000	\$17,967		\$232,866	\$115,034

Analysis of Expenses by Category

<i>Funding Source</i>	<i>Total \$\$</i>	<i>Personnel:</i>	<i>Coop Agree.</i>	<i>Contracts</i>	<i>Operations/Equip.</i>	<i>Travel</i>	<i>Other</i>
I&M - Biol. Inventory	\$158,900		\$97,434	\$30,000			\$31,466
I&M - VS Monitoring \$\$	\$171,250	\$84,784	\$71,432		\$7,034	\$3,000	\$5,000
Veg. Mapping Program	\$75,000		\$75,000				
WRD - WQ Monitoring	\$63,000		\$63,000				
Totals	\$468,150	\$84,784	\$306,866	\$30,000	\$7,034	\$3,000	\$36,466

Expense Totals By Category

<i>Category</i>	<i>SubTotal</i>	<i>Percent</i>
2_Personnel	\$84,784	18.11%
3_Coop. Agreements	\$306,866	65.55%
4_Contracts	\$30,000	6.41%
5_Operations/Equipment	\$7,034	1.50%
6_Travel	\$3,000	0.64%
7_Other	\$36,466	7.79%
	\$468,150	